**EDUCATIONAL TECHNOLOGY FOR LIFELONG LEARNING AND SUSTAINABLE DEVELOPMENT**

**Abstract**

In this study, our focus was to carryout a critical analysis on Educational Technology For Lifelong Learning And Sustainable Development. The study specifically was aimed at discussed the concepts educational technology, lifelong learning and sustainable development in detail. The paper also described how instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development. Some challenges facing the use of educational technology for lifelong learning and sustainable development have been pointed out. The study adopted the survey research design and randomly enrolled participants in the study. A total of 80 responses were validated from the enrolled participants where all respondent are active staff in the Federal ministry of Education Abuja office. From the result, the Pearson correlation coefficient, r, value of 0.821 was positive and statistically significant at (p< 0.000) same as 0.822. This indicates that educational technology (EDT), lifelong learning (LIL) will result in sustainable development (SDEV). also the second hypothesis showed that the Pearson correlation coefficient, r, value of 0.721 was positive and statistically significant at (p< 0.000) same as 0.722. This indicates that instructional media (INS), lifelong learning (LIL) will result in sustainable development (SDEV).The paper concludes with recommendations such as: the fiscal provision for instructional facilities in educational institutions should be increased so that the technology needs of the institutions can be adequately met, and government should organize technology awareness seminars and workshops for educators on how to overcome techno-phobia.

**CHAPTER ONE**

**INTRODUCTION**

* 1. **Background to the study**

The paper discussed the concepts educational technology, lifelong learning and sustainable development in detail. The paper also described how instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development. Some challenges facing the use of educational technology for lifelong learning and sustainable development have been pointed out. The paper concludes with recommendations such as: the fiscal provision for instructional facilities in educational institutions should be increased so that the technology needs of the institutions can be adequately met, and government should organize technology awareness seminars and workshops for educators on how to overcome techno-phobia.

As noted by Rao (2000), an assessment of the relative roles of the various salient features that affect the current and future prosperity of a society is useful for any civilisation looking to develop appropriate perspectives. To underscore what Rao observed, the developing world cannot afford to lag behind in providing the necessary political, social and economic knowledge through lifelong learning of heutagogical nature, if it has to fully participate in endeavours that are directed at promoting sustainable development which is defined by Tickell (1996) as, “durable change for the better in the human condition while protecting the earth we inherit and the earth we bequeath”. Heutagogy, which a study of self-determined learning can best facilitate learning for the benefit of sustainable development. As noted by Blaschke (2012) heutagogy capacitates learners to take appropriate and effective actions that help in the formulation and promotion of problem solving capacity in both familiar and unfamiliar changing settings.

A knowledgeable nation is important in the 21st century because if nations are to be responsive to contemporary challenges that are political, economic, social and environmental, they should appreciate continuous knowledge acquisition and its utilisation. This translates into the use of approaches that uphold the conviction that is strongly promulgated by the aforementioned author, who stated that human beings are the centre of concerns for sustainable development and should be entitled to a healthy and productive life which is in harmony with nature. It has to be noted that acquisition of knowledge should be from “womb to tomb”, if its recipients are to benefit on a continuous bases from it. This means sustainable development should be taught by societies through any form of heutagogical training from the time an individual reaches a stage of trainability. The strength of heutagogical approaches is that they promote self-efficacy in knowing how to learn and promotes continuous reflection on the learning process, which is apt for sustainable development. It is important to note that if sustainable development is to be achieved the communities within the developing countries should take responsibilities for the utilisation of their own resources.

**1.2 Statement of the problem**

Lifelong learning of heutagogical nature is important in getting people to appreciate that learning is a continuous process that should be supported if any form of development is to be realised. As averred by DVV (2007), lifelong learning is of distinct and growing importance since it constantly opens up new occupational and social opportunities (p.124). This means lifelong learning is transformative and cannot be ignored if sustainable development is to have some positive impact in the lives of the people in the developing world. As noted by Commission of The European Communities (2000) lifelong learning has also to be activated today as the key organising principle for education and training systems, and for the building of “knowledge society” of the 21st century. As observed by Tight (1998), Lifelong learning should be presented as a means for enabling individuals, organisations and nations to meet the challenges of an increasingly competitive world. Lifelong learning is according to (Preston, 1999; Walters, 1999 and Belenger, 1994), the process of allowing ourselves to be exposed to pre-packaged assortments of knowledge, throughout everyday life, either in home, through social movement, through work or through local community activities. It includes formal, non-formal and informal education.

This study will generate a discussion which its focus is to demonstrate that the relationship between educational technology lifelong learning and sustainable development is very important for the developing world. This is because both concepts are important for the amelioration of the lives of ordinary people in the developing world, which is endowed with resources and yet is characterised by poverty and ignorance. In order for the ordinary people to partake in the parsimonious utilisation of finite resources within their respective communities, they should receive the necessary training on the importance of such resources through both traditional and modern environmental conservation programmes that should be heutagogical. It is important because according to Alaboster and Blair (1996) education enables all individuals to make informed decisions about their responsibility towards their environment and community. However, it should be noted that the training of people on environmental issues should not necessarily be through formal education, because as noted by Walters (1999) Lifelong learning is both horizontal (between home, community, the media and work) and vertical (between different life stages). The heutagogical training is even more apt because according to Hase and Kenyon (2000) it promotes creativity, particularly in applying competencies to new and unfamiliar situations and by being adaptable and flexible. It is for knowledge sharing than for knowledge hoarding and imposition of knowledge by the powerful on the disempowered.

**1.3 Objectives of the study**

1. Examine the relationship between educational technology, lifelong learning and sustainable development.

2. Investigate how instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development.

3. Examine the challenges facing the use of educational technology for lifelong learning and sustainable development.

**1.4 Hypothesis**

H01: There is no relationship between educational technology, lifelong learning and sustainable development.

H02: There is relationship between the use of instructional media and technologies and the facilitation of lifelong learning, and sustainable development.

**1.5 Significance of the study**

This study that will be focusing on the relationship that exists between instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development. It will highlight some of the challenges facing the use of educational technology for lifelong learning and sustainable development . The will conclude with recommendations such as: the fiscal provision for instructional facilities in educational institutions should be increased so that the technology needs of the institutions can be adequately met, and government should organize technology awareness seminars and workshops for educators on how to overcome techno-phobia.

**1.6 Scope and Limitation of the study**

The study will be focused on the relationship between instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development. This data set was collected from the Federal Ministry of Education in Abuja. The researcher with the assistance of two assistants administered the questionnaire. Lastly the non-numeric response cases are excluded from the analysis due to computation reasons; however it is my view that their small proportion would not significantly alter the results.

**1.7 Limitation of the study**

The area of this research work is limited to how Educational technology influence longlife learning and sustainable development by extension. Respondents for this study is limited to the staff of federal ministry of education in Abuja office.

The researcher in carrying out this study encountered numerous problems, which includes:

i) Fund.

ii) Time.

iii) Lack of research materials

iv) Responds of the respondents

i) FUND – This included lack of enough fund to move around and visit the various areas in the state, and also lack of money to buy enough research material which constitutes on impediment of to researchers high cost of transportation in the city due to long distance also imposed its own limitation on the researcher.

**CHAPTER TWO**

**LITERATURE REVIEW**

**CONCEPT OF LIFELONG LEARNING**

The term "lifelong learning" was used as early as the late twenties. There is a bit of confusion as to what lifelong learning means exactly. According to Knapper &Cropley (1991: 17), lifelong learning has a different meaning in different countries: "in the United States it has frequently been regarded as simply a new term for adult education (as in the 1976 Lifelong Learning Act, for example). and has been linked with "alternative" educational activities such as educational brokering. In Europe the concept has more frequently been associated with the linking of learning and work. especially through provision of paid educational leave, recurrent education. or with open learning". In South Africa the concept of lifelong learning has been developed by the trade union movement, particularly in organisations within the Congress of South African Trade Unions (Cosatu), as one of the components of a reconstructed education and training system capable of meeting both equity and development needs. One of the aims of a programme of lifelong learning, as Adrienne Bird of the National Union of Metal Workers of South Africa (Numsa) explains. is the "incremental skilling of workers by means of a system that knits together formal and informal or on-the-job learning" (DSA in Depth. 1993:42). From the above it is not surprising that the Skills Development Act (199) was a brain child of the department of labour. The challenge facing the department of labour, is to implement its dream and reap the fruits. Field (2000:133) states that "the education policy matra of the new millennium is lifelong learning". The researcher hopes it is not just one of the millennium excitement but a reality as it is significant for the nation. Knapper & Cropley (1991 :20) differentiates between lifelong education and lifelong learning. According to them, "lifelong education can be thoL1ght of as a set of organisational and procedural guidelines for educational practice aimed at fostering learning throughout life". It has an alternative approach to the provision of learning and experiences for all citizens.

The followifl9 definition by Longworth &Davies (1996:21) will be used throughout this research, "lifelong learning is... the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances, and environment." Delors as quoted by Wilson (1998:4) argues that "lifelong education should enable people to develop awareness of themselves and their environment and encourage them to play their social role at work and in the community". According to Longworth & Davies"s (1996:21) definition each individual has a learning potential. Given learning opportunities, discarding learning barriers and providing access to education will encourage and motivate learning throughout life. The human being's experience incorporates both continuity and change, hence the need for lifelong learning, which is a process, a continuum of interdependent elements. Lifelong learning embraces all forms of learning, formal and informal, throughout life. Michael (1992: 20) call it a "seamless education", which clearly means there are no boundaries, while Butcher (1995:1) argues that "learning should continue throughout life (rather than being limited to childhood) and should be of direct relevance to the needs and life experience of learners" be they social or economic.

Informal education needs to be recognised. The new South African education policy has put a process of recognition of prior learning as a tool to bridge the gap between formal and informal education. "The recognition of prior learning evolved from the National Training Strategy Initiative in 1994 and its objectives is to assist in fast tracking skilled persons to qualification status within the NQF". (Faulds, 2001 :20). Formal education is characterised by a certificate whilst informal education was not recognised. Recognition of prior learning is still at its infancy and very important in repOSitioning South Africa's education system. In South Africa the South African Qualifications Authority (SAQA) Act was passed in 1995. The Act can be thought of a set of organisational and procedural guidelines. In terms of this Act. SAQA will establish bodies to implement the National Qualifications Framework(NQF). The bodies that will be established are the following: National Standards Bodies (NSBs), Standards Generating Bodies (SGBs) and Education and Training Quality Assurers (ETQAs).

Interpretations of lifelong learning vary widely around the world and it can be argued that there is no real agreement on what exactly lifelong learning means (UNESCO 2016a). In fact for some, LLL remains a contested concept. According to Bengtsson, the concept of LLL remains vague and without a coherent implementation strategy (Bengtsson, 2013), and as various authors have stated, it is a ‘chameleon like’ and ‘slippery’ term (Johnston 2000) which allows it to be adapted according to the context and purpose (Lovren & Popovic, 2018). Diverse understandings about learning have also fuelled ongoing disagreements about the role and significance of lifelong learning. Some interpretations limit the scope of learning to formal education and training systems whilst others regard lifelong learning as covering all kinds of informal learning, differing valuations that underpin ongoing disputes about lifelong learning (Hager, 2011). LLL has also been labelled by some as a ‘Nordic’ and ‘Western’ concept imposed on the Global South which has a stronger tradition of ‘adult education’ (Torres 2004). Other critiques see LLL as part of an agenda to enable the state to withdraw from the education process, and the field of adult education in particular, shifting responsibility to individuals (Lovren & Popovic, 2018). Although the initial proposals on LLL were meant for all countries, subsequent development of the concept has occurred mainly in the context of OECD countries, and questions might well be raised about its relevance for less developed countries (Hasan, 2012). Despite these tensions, in broad terms, the concept of LLL has generally evolved to be understood today as covering all education and training during a lifetime, including both initial education and training and adult learning. It is considered ‘lifelong’ but also ‘lifewide’, covering learning in institutions, families, communities and workplaces. It is also considered ‘life-deep’, because it recognises the ongoing and active acquisition, development and deployment of knowledge over a lifetime (Bélanger, 2016). It is worth noting that these concepts are reflected in the report of the ILO Global Commission on the Future of Work which calls for a human centred agenda for the future of work that ‘means investing in people’s capabilities, enabling them to acquire skills, reskill and upskill and supporting them through the various transitions they will face over their life course” (ILO 2019, p. 24). However, in various international and national contexts, definitions of LLL differ, reflecting key conceptual issues including for example the extent to which labour market utility is prioritised and whether informal and non-formal learning is included. This is evident in the following three definitions, one from UNESCO, one from the ILO and another from the European Commission: • “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and/or qualifications for personal, social and/or professional reasons” (UNESCO 1984); • “all learning activities undertaken throughout life for the development of competencies and qualifications” (ILO 2006); and • “all general education, vocational education and training, non-formal education and informal learning undertaken throughout life, resulting in an improvement in knowledge, skills and competences within a personal, civic, social and/or employment-related perspective. It includes the provision of counselling and guidance services” (EC 2006). There is no single model for LLL which can be supported by the diverse range of education and training systems that exist amongst ILO constituents. As such, given the range of perspectives presented here, it is clear that a wide range of learning processes, learning outcomes and sites of learning can be considered as forming part of LLL. However, notwithstanding the potential breadth of the concept, it is worth noting that in recent years LLL has in many policy contexts become increasingly used as a proxy term for adult education and training (see for example the European LLL Index which is based on analysis of adult learning policies (EC, 2015)) - but only in terms of labour market driven learning and not the broader agenda of adult education which includes civic engagement and personal development. As such, one question that requires further consideration is which elements of LLL in its broadest sense might be given priority by constituents and how ambitious or modest should that scope be.

**2.1.2 LONGLIFE LEARNING ECOSYSTEM**

The report of the ILO Global Commission on the Future of Work calls for the establishment of a lifelong learning ecosystem. Whilst not specifically defining what that means, the report notes that “establishing an effective lifelong learning ecosystem is a joint responsibility, requiring the active engagement and support of governments, employers and workers as well as education institutions….governments must broaden and reconfigure institutions such as skills development policies, employment services and training systems” (ILO 2019, pp. 31-32). Whilst an ambitious goal, it must be recognised that implementation of LLL has in the past been considered weak, uneven and often without strong commitment (Bengtsson, 2013). Few countries can be identified as having clearly defined the features of an overall system of lifelong learning, or as having attempted to implement one. Whilst lifelong learning has been widely accepted in rhetoric there is a low level of operationalization (Lovren & Popovic 2017). Indeed, if the existence of a law, policy or strategy on LLL is accepted as progress towards implementation, the UNESCO Institute of Lifelong Learning (UIL) has identified 41 countries where such instruments exist (23 in Europe, 5 in Asia and the Pacific, 8 in the Americas, and 6 in Africa) (UIL, 2019) although the high incidence of interest in Europe may reflect the policy guidance and funding criteria used for the 2014-2020 programming period for EU Structural Funds (see EC, 2015).

This slow and uneven pace of implementation is due to many complex factors including the ‘lack of workable and agreed upon strategies for implementation…the lack of a coherent and equitable system of financing LLL for all… and the underestimated resistance to change among the main stakeholders in the traditional systems of education’ (Bengtsson 2013, p. 346). Regardless, it is clear that taking steps to implement LLL demands a broad perspective that sees all learning activities as part of a national system of learning (Hasan 2012). Lifelong learning provides us with the organizational principle for thinking about educational priorities in a coherent, cross-sectoral and interconnected way. In that sense, issues of governance and coordination become central to discussions about how to operationalise LLL and develop an LLL ecosystem. For an LLL ecosystem to be established, there is a need to outline the institutional setup through which roles and responsibilities are matched with well-functioning system of coordination, monitoring and evaluation (ILO 2018). As noted by the EC, a lifelong learning strategy on its own is not enough to increase participation, but it is enabled by co-ordination and collaboration between different institutions and stakeholders. In a LLL ecosystem however, the governance, coordination and social dialogue challenges are substantial. Given the scope of learning potentially included within a framework of LLL, the range of actors, systems and sub-systems at the national, regional and local levels creates a large, complex and fragmented policy landscape. The need to ensure sound initial education and basic skills to enable future learning, the importance of clear and accessible pathways between different education and training systems, including adult education and labour market programs, plus the importance of systems for the validation and recognition of formal and non-formal learning are all substantial challenges to be addressed. For example, in terms of adult education alone, there have been calls for reshaping organisational or institutional setups for effective delivery and monitoring of adult education including coordination between government and wider stakeholders in the field of education, employment and social protection, establishment of one-stop shops such as career guidance agencies and establishment of assessment and certification agencies (EC, 2015). As education and training systems continue to evolve, the nature of the training offer has also become more diverse and digital. The growth of micro learning, digital credentials, massive online courses (MOOCs) and the personalisation of learning are affecting the role of all education, training and service providers involved.

The learning ecosystems that seek to unlock the potential of each individual, as well as the collective learning potential of society, are embedded in local communities, are learner centred and involve partnerships between different learning environments (ILO 2018b). Ensuring these networks are recognised and supported in LLL ecosystems is thus an important priority. Building an effective LLL ecosystem also demands establishment of mechanisms for policy alignment at local and regional levels (EC, 2015). Taken together, these perspectives and developments present a challenging picture of what might constitute a LLL ecosystem. Furthermore, given the limited feasibility and significant challenges associated with bringing all aspects of LLL under the responsibility of one government ministry, it may be reasonable to expect countries to establish a clear allocation of responsibilities across ministries and make greater efforts to support coordination, collaboration and social dialogue through initiatives such as inter-ministerial and tripartite platforms. However, this coordination and framework for policy action should be based on agreed elements of the LLL system which would also then allow for indicators to be developed to track implementation of LLL (see for example the Composite Learning Index (CCL 2010) developed by the Canadian Council of Learning). Any discussion of LLL ecosystems should also include the role of social partners. Building on earlier ILO normative and policy frameworks, the report of the ILO Global Commission on the Future of Work argues that ‘employer and worker organisations also have a leading role to play in this ecosystem’ (ILO 2019, p. 31), a role that includes governance, financing and quality assurance and one that demand effective social dialogue to be in place. This approach recognises that policies to promote lifelong learning can be taken by a variety of actors including the state, social partners, sector or occupational organisations and single companies. It also recognises that these different approaches and initiatives are embedded in the national institutional settings of the education and training system or systems that exist. Thus given the broad potential scope of a LLL ecosystem, one question that requires further consideration is what other steps might be taken to support development of LLL ecosystems beyond promoting the need for wider engagement, greater coordination and tripartite governance?

**2.1.2 CHARACTERISTICS OF THE LIFELONG LEARNER**

Knapper et al (1991) sum up a lifelong learner as someone who is strongly aware of the importance and need for lifelong learning, someone who is motivated to pursue his/her dreams of learning, is aware of the relationship between learning and real life and lastly he/she has the necessary skills that will enable him/her to pursue lifelong learning. The characteristics needed by people to be lifelong learners include people with vision, people who are not afraid of change, people who see change as a challenge rather than an obstacle, people who see solutions to their problems through continuous learning and who are information literate. Such people realise that they cannot remain qualified no matter how educated or intelligent they may be; they need refuelling from time to time.

The increase in student numbers in institutions of higher learning and other private colleges is a good sign that people are taking education seriously. The increase in the number of adults in the abovementioned paragraph confirms that people take continuous education as a solution to the problem. There is, however. a disturbing factor which might discourage lifelong learners. The lack of jobs might be a deterrent or barrier to motivating people to acquire the selfconcept of lifelong learning.

**2.2 Lifelong Learning and Sustainable Development**

Sustainable development is a term which according to Redclift (1991), was used at the time of the Cocoyoc declaration on environment and development in the early 1970s. Since then it has become the trademark of international organisations dedicated to achieving environmentally benign or beneficial development (p.32). It is important to indicate that whenever the term is used, it communicates the parsimonious utilisation of resources that should be allowed to sustain coming generations (posterity). It is therefore crucial to aver that sustainable development cannot be achieved if people are not willing to learn through new technologies and the contemporary approaches that should be employed in poverty alleviation endeavours. This is true because poverty contributes immensely to the unsustainable exploitation of resources because there is a tendency for poor people, who are often unenlightened or illiterate to have limited to no control over the resources that are in their milieus.

It is therefore important to have lifelong learning that promotes conservation of resources as a vehicle through which people can be transformed to respect their relationship with the environment and to jealously guard against unscrupulous exploitation of their resources. As opined by UNCED (1992), critical promotion of sustainable development should improve the capacity of the people to address environmental and development issues through generating ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development. The heutagogical as noted by Hase and Kenyon (2000) promotes communication and team work skills. These qualities are necessary for sustainable development as it can only be achieved through team work that should be characterised by camaraderie and quid pro quo. That is where knowledge and skills that are beneficial for sustainable development are shared by teams or groups on a continuous bases.

It is worth noting that according to (Sussmuth, 2004; Collins, 1998), promotion of the development of the personality, in the sense of the mutual relationships between the individual and his or her surrounding is a necessity for an understanding of each person’s role in the social context. It is important to mention that through provision of knowledge the developing countries can empower the poor people as well as the political leaders to attach value on their resources and formulate apt strategies for their conservation; hence the need for heutagogical approaches to be employed to empower the ordinary people to take control of their own resources without any form of pressure from outsiders who often undermine sustainable development standards themselves.

According to UNESCO (2010) lifelong learning “from cradle to grave” is a philosophy, a conceptual framework and an organisation principle of all forms of education, based on inclusive, emancipatory, humanistic and democratic values; it is all-encompassing and integral to the vision of knowledge-based society. It is in the light of this understanding that lifelong learning of heutagogical nature becomes necessary to foster the training of people in sustainable development.

Poverty and other forms of deprivations in the developing world are responsible for the denudation of finite resources that should sustain mankind now and in the future. As stated by Rao (2000) forest areas continue to be depleted in many parts of the world, adversely affecting biodiversity and habitats, reducing the potential for carbon sequestration and hence contributing to global warming, and diminishing watershed functions as well as other ecological services. As noted by Sterling (2001) we are educated by and large to “compete and consume” rather than to care and conserve. It has to be noted that it is not only poor people who are not conscious of sustainable development. As noted by Sterling (1996), many people influential in political, economic, social and educational arenas still have little or no interest in or awareness of sustainable development issues, or the potential of education to address them.

It is important to state that continued phenomena of extinction of biological species poses serious problems for access to medicinal and aesthetic benefits. The points that are raised by Rao and those by Sterling cannot be ignored because they require immediate and serious attention by every country. It is this observation that informs the need for the training of adults through adult education programmes of heutagogical nature, which are well embraced under lifelong learning. This should include the training in the use of indigenous as well as traditional strategies through which communities managed to prudently utilise resources. The training of adults on sustainable development should be made instrumental in sensitising them about problems that can jeopardise their lives if resources are not parsimoniously utilised, allowing them to generate their own decisions, hence emphasise in the employment of heutagogy. As noted by Hase and Kenyon (2007) heutagogy applies a holistic approach to developing learner capabilities, with learning, which occurs as a result of personal experiences.

Heutagogy and Adult education are both important for sustainable development, with the latter being important because as noted by Cropley (1989), it is obvious that most learning takes place in adulthood, simply because most people spend more of their lives as adults than as children. This observation should not by anyway undermine the conceptual conviction that learning can and should be a lifelong occupation (Illeris, 2006). It is important also to note that trained adults normally create environments that are characterised by knowledge generation and its consumption. As noted by Thomas (2004) mother’s education, father’s education,

mother’s motivation and father’s motivation should represent home environment. In interpreting what Thomas is saying, it is pivotal for us to make sure that people learn on a continuous basis, which will enable the world to have mothers and fathers that are educated and therefore motivated to be futuristic in their thinking and pass essential sustainable development strategies to posterity. This means preparing for a future of generations that would parsimoniously utilise resources that are available and would be available for the coming generations.

The connection between Lifelong Learning of heutagogical nature and Sustainable Development cannot be ignored if the developing world is to realise the required amelioration for the deprived populace. The training of people on better approaches in the use of their resources requires full established methodological approaches that are fully funded by the government and the civil society. But most importantly, the need for the people to understand the approaches is crucial, hence the need for their empowerment through environmental education that should employ heutagogical approaches, which is embraced under lifelong learning. Lifelong learning is very important because as noted by Livingstone (1999) we are born more helpless than most other species and then constantly socialised by ever more complex and sophisticated communications with other humans throughout our lives.

It is important to indicate that through lifelong learning of heutagogical nature, knowledge gap that prevent the ordinary people from influencing policies that are designed to benefit them, including those on conservation, can be bridged. The natural resources should be conserved through the mechanisms that are accommodative and empowering, which dictates that the ordinary people should be informed about the consequences of human behaviour and activities that disregard cautions against depletion of natural resources.

Even in areas that are not environment related developing countries cannot ignore evident demands for learning, which can be fulfilled through lifelong learning of a heutagogical nature, which allow the learners themselves to shape their own learning. As noted by Varavarn (2010) over the years millions of literacy and adult education graduates from diverse backgrounds ranging from prominent political, business and community leaders to workers in the informal sector have generated new demands for further and continuing education (p.26). It is important to mention that Botswana has made some significant improvements on its education sector, but does not invest adequate resources in lifelong learning programmes that are designed by the learners themselves. This calls for consciousness rising amongst the leadership, so that lifelong learning programmes of heutagogical nature can enjoy the recognition that they deserve, which can be realised through allocation of resources for various lifelong learning endeavours that promote the participation of learners in the decision making processes.

The training of experts in lifelong learning is important as apt methodologies can be implemented accordingly by people who are trained to actualise them, than to rely on traditional approaches that are not germane for heutagogical interventions. The lifelong learning crusade is important in making sure that those countries such as Botswana, work closely with other countries regionally and globally, to provide avenues through which people can attach the importance to learning, in order to address problems that are directed at ameliorating their political, social, economic and environmental conditions. It has to be noted that lifelong learning is most important by virtue of its relevance in dealing with problems that are faced by the communities in developing countries like Botswana. The need for the

formulation of policies that are meant to achieve lifelong learning objectives is an undertaking that must be fulfilled, hence the need for human resource that has the expertise to aid the decision making process of the less empowered.

Lifelong learning coupled with heutagogy, offers its recipients the rare opportunity to have some input in their own learning, which is not accommodated under the traditional system, which places the teacher as a protagonist that should design learning programmes. It is therefore imperative that lifelong learning should be implemented with the understanding that it is empowering and can promote decision making capacity amongst the people who are often ostracised from the decision making platforms. As noted by Preece (2009) the semantic shift over the years from education to learning implicitly put responsibility for acquiring skills, knowledge and understanding onto the individual rather than the provider and suggests the move away from the traditionally linear teacher-student relationship.

The lifelong learning avenues that are available should be exploited maximally for the benefit of the people who for whatever reasons missed and continue to miss the opportunities that are availed by the schools and related educational formal structures. Lifelong learning should be instrumental in promoting information dissemination, so that the knowledge nations can be established and sustained in developing world.

Lifelong Learning and Social Justice

The other area where lifelong learning can be instrumental is that of social justice, it is so because lifelong learning through community education that is heutagogical can afford people the opportunities to access programmes that they would otherwise not be able to reach. The literacy of the adult population in any country requires the wide and well enriched programmes that are accommodated under lifelong learning of heutagogical nature, which allow the beneficiaries freedom to make decisions on which programmes to utilise. As noted by Alam (2004), literacy programmes usually allow individuals to acquire knowledge and skills through a variety of activities, promote informal learning, and encourage people to make and follow their own educational plans (p.47). As a vehicle for social justice lifelong learning can advocate and promote what Stott and Lillis (2008) indicated as the following;

Equality citizenship (equal civil and political rights), social minimum (living a decent life in society), equality and opportunity (life chances should depend on one’s abilities and motivation, including fair chance to acquire skills and abilities) and fair distribution (distribution of resources and goods should be fairly conducted).

Lifelong learning can through technological enlightenment programmes create awareness amongst the ordinary people in communities, which has capacity to generate interest amongst them about the importance of modern and indigenous technology in their lives, which can promote the conservation of resources. As averred by (Lengrand, 1970, Michalakelli and Rhodes, 2000) scientific progress and modifications in techniques are gradually affecting the totality of mankind. Undoubtedly, technology has revolutionized society in many places around the globe and its influence has permeated into all the facets of our lives.

In pursuit of social justice it is pivotal that lifelong learning of heutagogical fashion gets characterised by the inclusion of the poor people in determining and designing their training on the parsimonious use of their resources. It should be the people themselves who should present their training needs, which should be met by the governments and other service

providers. As noted by Watson and Taylor (1998) it is important to motivate individuals especially from under-represented groups, towards lifelong learning. In view of what Watson and Taylor mentioned it is important to note that lifelong learning should be heutagogical, which means it has to appreciate the experiences of the ordinary people including how they lead their lives and how they conserve their resources. It is indisputable that social justice can be realised through lifelong learning, which as noted by Commission of the European Communities (2000) is all purposeful activity, undertaken on an on-going basis with the aim of improving knowledge, skill and competence… to adjust to the demands of social and economic change.

Lifelong Learning and Decision Making

It is indisputable that the relegation of people from the decision making arenas and platforms is often encouraged by their lack of knowledge and skills that are necessary for political empowerment and social justice. This is a limitation that even where heutagogical approaches are used, they may still not be able to generate decisions that can change the world and prevent its destruction. It is also important to indicate that the world still has people who are ignorant, which requires that more efforts be expended in making them literate and empowered to make decisions. As noted by Riftin (2000) more than half the human race has never made a telephone call (p.6). The dream of attaining sustainable development will remain a mirage if developing countries remain characterised by social injustice, such as the exclusion of the ordinary people from the benefits of technological advancement that could prevent the exploitation of their resources by external forces. It is indisputable that majority of the people that do not utilise modern technology are equally ostracised from decision making avenues at community, national, regional and international levels, which requires heutagogical remedies that embrace than to despise the so called primitive ways of knowledge sharing or training.

The empowerment of people through lifelong learning of heutagogical nature is necessary, so that they autonomously generate decisions and accordingly prioritise them. The inclusion of people in decision making would enable programmes and appeals that agitate for parsimonious exploitation of earthly resources to have some significant impact. It is disturbing to learn that, as noted by Bosco (2007), they are cities in the first world that do not have internet resources and it is obvious that access in the third world countries is small to virtually insignificant. This is despite the fact that we are currently living in an era of very rapid change, arguably the most rapid change ever seen. In most countries the internet and related technologies is responsible for changing the ways in which we work, learn, relax, socialise and above all, communicate (Corkill, 2008).

As noted by Gravells and Simpson (2009) only by eliminating discrimination and embracing diversity can we ensure that every single person is able to take advantage of the opportunities available to them and make a valuable contribution to the success of his/her country. This calls for what was proposed by Heider as cited by Emery (1974) who indicated that, people can make sense of the world and generalise from their particular perceptions, can conceptualise, and can perceive invariance.

The literacy skills that can promote communication amongst the citizens can be realised through lifelong learning of heutagogical nature, which is designed with the input of those who should benefit from it. The participation of the people in the design of programmes that are

meant for them is important because it promotes a sense of ownership and embraces their decisions. The functional skills are also essential for any community to realise the necessary changes in the important areas such as, health, environmental conservation, sanitation and interactive discussions that are pivotal for political advancement. It is only through the training of people on sustainable development that can lead to them recognising the importance of their resources in development. As noted by Nayar (1994) both Stockholm and Cocoyoc declarations contained an ecological vision combined with Third World demands for development and social justice. It is important to indicate that most communities in the developing world are not informed about the declarations so mentioned, which could have guided them into attaching some importance on their relationship with their resources after their contextualised conclusions.

The social skills are also necessary for human existence and can be achieved through the provision of avenues that are embraced under lifelong learning, such as the promotion of consciousness about human rights, which is promoted with the understanding that learning occurs through a progressive cycle namely: direct experience, reflective observation, conceptualisation and active experimentation (Venkatesh, Small and Marsden, 2003). The progressive cycle is also important in the enhancing the ability of individuals to make informed decisions in the heutagogical manner. For instance, experience, observation, conceptualisation and experimentation are important for decision making. As noted by Inoue (2007) it is obvious that general skills and personal qualities are considered at least as important as professional qualifications. As noted by Kuit and Fell (2010) educators today are tasked with developing lifelong learners who can survive and thrive in a global knowledge economy- learners who have the capacity to effectively and creatively apply their skills and competencies to new situations in an ever-changing, complex world.

The social empowerment has capacity to promote gender sensitization amongst the nations and most importantly those that are still developing like Botswana. The provision of materials and their consumption for the benefit of the people on social issues such as socio-cultural activities, presents lifelong learning of heutagogical nature as even most important. In the economic sector lifelong learning is important in promoting the appreciation of knowledge and skills that are important for economic advancement such as entrepreneurial skills. It is important to note that the improvement of the socio-economic status of the people who are languishing in poverty is crucial in the conservation of natural resources by communities. It has to be noted that according to Chambers (2003):

In the last years of the twentieth century, change accelerates and the future becomes harder to foresee. As instinct communications spread, and power and wealth concentrate, so ideas move faster. A balance sheet of development and human well-being shows achievements and deficits. Power and poverty are polarised at the extremes, with a global over class and global underclass. An evolving consensus converges on wellbeing, livelihood, capabilities, equity, and sustainability as interlinked ends and means. Huge opportunities exist to make a difference for the better. The challenge is personal, professional and institutional, to frame a practical paradigm for knowing and acting, and changing how we know and act, in a flux of uncertainty and change.

It is clear from what is advanced by Chamber that, knowledge acquisition is very important in the realisation of human advancement, which further necessitates heutagogy in lifelong learning, where all forms of training embraces provision of knowledge on sustainable development and on a sustainable basis. For instance, poverty is normally aggravated by lack of knowledge, which can be arrested through lifelong learning programmes that are designed to better the conditions of the global citizens that are relegated to abject poverty with their full participation. Through lifelong learning of heutagogical nature, the African people can also enrich their indigenous knowledge systems and most importantly, retrieve that which is ignored and discarded in order for neo development agenda to be designed. As vividly stated by Adjei and Dei (2008) it does not require any intellectual imagination to realise that the euphoria of international development has worn thin in the minds of many Africans, partly, because the so called development paradigm in Africa has come at a high human, ecological, political, and ethical costs to Africans.

It is very important to indicate that the realisation of better living conditions and fulfilment of the Millennium Development Goals (MDGs) is important for the people to stay informed, but most importantly for them to inject their influence on activities that are undertaken. It is important for the people to participate in their own development, which should emphasise the essential components that attach value on sustainable development. This calls for the leadership that cherish and understand the importance of educating the citizenry employing heutagogical approaches, irrespective of its position in the national strata. This means through lifelong learning of heutagogical nature the leaders in the political and economic spheres should be influenced by well-informed experts or technocrats, hence the need for people to acquire qualifications in the important areas, which can be realised through serious investments in lifelong learning endeavours that are accommodative of ordinary people’s experiences.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 Introduction**

In this chapter, we would describe how the study was carried out.

**3.2 Research design**

Research design is a detailed outline of how an investigation took place. It entails how data is collected, the data collection tools used and the mode of analyzing data collected (Cooper & Schindler (2006). This study used a descriptive research design. Gill and Johnson (2002) state that a descriptive design looks at particular characteristics of a specific population of subjects, at a particular point in time or at different times for comparative purposes. The choice of a survey design for this study was deemed appropriate as Mugenda and Mugenda (2003) attest that it enables the researcher to determine the nature of prevailing conditions without manipulating the subjects.

Further, the survey method was useful in describing the characteristics of a large population and no other method of observation can provide this general capability. On the other hand, since the time duration to complete the research project was limited, the survey method was a cost effective way to gather information from a large group of people within a short time. The survey design made feasible very large samples and thus making the results statistically significant even when analyzing multiple variables. It allowed for many questions to be asked about a given topic giving considerable flexibility to the analysis. Usually, high reliability is easy to obtain by presenting all subjects with a standardized stimulus; observer subjectivity is greatly eliminated. Cooper and Schindler (2006) assert that the results of a survey can be easily generalized to the entire population.

**3.3 Research settings**

This study was carried out in Federal ministry of education Abuja Nigeria, The Federal Ministry of Education is a part of the Federal Ministries of Nigeria that directs education in Nigeria. It is located at Block 5A, Federal Secretariat Complex, Shehu Shagari Way, Central Area, P.M.B. 146, Garki, Abuja.

**3.4 Sources of Data**

The data for this study were generated from two main sources; Primary sources and secondary sources. The primary sources include questionnaire, interviews and observation. The secondary sources include journals, bulletins, textbooks and the internet.

**3.5 Population of the study**

A study population is a group of elements or individuals as the case may be, who share similar characteristics. These similar features can include location, gender, age, sex or specific interest. The emphasis on study population is that it constitute of individuals or elements that are homogeneous in description (Udoyen, 2019). The population of the study were all staff of Federal ministry of education Abuja Nigeria.

**3.6 Sample size determination**

A study sample is simply a systematic selected part of a population that infers its result on the population. In essence, it is that part of a whole that represents the whole and its members share characteristics in like similitude (Udoyen: 2019). In this study, A total of 95 respondents were purposively selected by the researcher.

**3.8 Instrumentation**

This is a tool or method used in getting data from respondents. In this study, questionnaires and interview are research instruments used. Questionnaire is the main research instrument used for the study to gather necessary data from the sample respondents. The questionnaire is structured type and provides answers to the research questions and hypotheses therein.

This instrument is divided and limited into two sections; Section A and B. Section A deals with the personal data of the respondents while Section B contains research statement postulated in line with the research question and hypothesis in chapter one. Options or alternatives are provided for each respondent to pick or tick one of the options.

**3.9 Reliability**

The researcher initially used peers to check for consistence of results. The researcher also approached senior researchers in the field. The research supervisor played a pivotal role in ensuring that consistency of the results was enhanced. The instrument was also pilot tested.

**3.10 Validity**

Validity here refers to the degree of measurement to which an adopted research instrument or method represents in a reasonable and logical manner the reality of the study (Udoyen, 2019). Questionnaire items were developed from the reviewed literature. The researcher designed a questionnaire with items that were clear and used the language that was understood by all the participants. The questionnaires were given to the supervisor to check for errors and vagueness.

**3.11 Method of Data Collection**

The data for this study was obtained through the use of questionnaires administered to the study participants. Observation was another method through which data was also collected as well as interview. Oral questioning and clarification was made.

**3.12 Method of Data Analysis**

The study employed the simple percentage model in analyzing and interpreting the responses from the study participants while the hypothesis was tested using Pearson Correlation statistical tool SPSS version 23.

**3.13 Ethical consideration**

The study was approved by the Project Committee of the Department. Informed consent was obtained from all study participants before they were enrolled in the study. Permission was sought from the relevant authorities to carry out the study. Date to visit the place of study for questionnaire distribution was put in place in advance.

**CHAPTER FOUR**

**PRESENTATION OF DATA AND ANALYSIS**

**4.1 Introduction**

This chapter presents the analysis of data derived through the questionnaire and key informant interview administered on the respondents in the study area. The analysis and interpretation were derived from the findings of the study. The data analysis depicts the simple frequency and percentage of the respondents as well as interpretation of the information gathered. A total of Ninty-five(95) questionnaires were administered to respondents of which 80 were returned. The analysis of this study is based on the number returned.

**4.2 DEMOGRAPHIC DISTRIBUTION**

**4.2.1 Gender distribution of respondents**

|  |  |  |
| --- | --- | --- |
| **Sex**  | **No. of Respondents** | **Percentage**  |
| Male  | 48 | 60% |
| Female  | 32 | 40% |
| Total  | 80 | 100 |

Source:

From the table above 48 (60%) respondents are male, while 32 (40%) are female. The table shows that there are more males than females among the respondent in the local government selected for the study.

**4.2.2 Marital status of respondents**

|  |  |  |
| --- | --- | --- |
| **Marital status**  | **No. of respondents**  | **Percentage**  |
| Married  | 55 | 68.8% |
| Single  | 20 | 25% |
| Divorced  | 5 | 6.2% |
| **Total**  | **80** | **100%** |

**Source:**

The above table shows that 55 (68.8%) respondents are married, 20 (25%) are single while 5 (6.2%) of the respondents are divorced. This table shows that majority of the respondents are married.

**4.2.3 Age distribution of respondents**

|  |  |  |
| --- | --- | --- |
| **Age range** | **Frequency** | **Percentage (%)** |
| 21-30 | 14 | 18.9% |
| 31-40 | 12 | 14.2% |
| 41-50 | 30 | 35.5% |
| 51-60 | 14 | 19.2% |
| 61 years and above | 10 | 12.2% |
| **Total** | **80** | **100%** |

Table depicts that 14 (18.9%) of the respondents fell within the age limit of 12-30 years, 12 (14.2%) where within the age range of 31-40 years, 30 (35.5%) fell within the age of 41-50, 14 (19.2%) fell within the age range of 51-60 while 10 (12.2%) where within the age range of 61 years and above.

**4.1.4 Religions Affiliation of Respondents**

**Table 04: Distribution of religion affiliation of respondents**

|  |  |  |
| --- | --- | --- |
| **Religion** | **Frequency** | **Percentage (%)** |
| Christianity | 68 | 85% |
| Islam | 10 | 12.5% |
| Traditional religion | 2 | 2.5% |
| **Total** | **80** | **100** |

**Source:**

Table above presents the information on the religions affiliation of respondents. Majority of about 68 representing 85% of the respondents are Christian. 10 or (12.5%) of the respondents are Islam, while 2 of the respondents representing 2.5% are traditional religion

**4.2.5 Educational Qualification of Respondents**

**Table 05: Distribution of educational qualification of respondents**

|  |  |  |
| --- | --- | --- |
| **Education qualification** | **Frequency** | **Percentage (%)** |
| FLSC | 7 | 8.2% |
| SSCE/GCE | 6 | 7.7% |
| OND | 14 | 16.6% |
| NCE | 11 | 13.0% |
| Bachelor’s Degree/HND | 26 | 33.0% |
| Master’s Degree | 16 | 19.2% |
| **Total** | **80** | **100%** |

**Source**:

From the table above 7 (8.2%) of the respondents had first school leaving certificate; 6 or 7.7% of the respondents were those with SSCE or GCE; 14 (16.6%) were holders of OND/Equivalent, NCE were 11 (13.0%). Those having the Bachelor’s degree were 26 (33.0%); those with master’s degree were 16 (19.2%) From the table it is obvious that those with a bachelors had the highest respondents of 26 or 33.0%.

**4.3 RESEARCH HYPOTHESIS**

**H0:** There is no relationship between educational technology (EDT), lifelong learning (LIL) and sustainable development (SDEV).

**HA:** There is a relationship between educational technology (EDT), lifelong learning (LIL) and sustainable development (SDEV).

**Level of significance**: 0.01

**Decision Rule:**

In taking decision for “r”, the following riles shall be observed;

1. If the value of “r” tabulated is greater than “r” calculated, accept the alternative hypothesis (H1) and reject the null hypothesis (H0).
2. If the “r” calculated is greater than the “r” tabulated, accept the null hypothesis (H0) while the alternative hypothesis is rejected

**Table 1: Pearson Correlation Table showing the relationship between educational technology (EDT), lifelong learning (LIL) and sustainable development (SDEV)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | SDEV | LIL | EDT |
| SDEV | Pearson Correlation | 1 | .821\*\* | .822 |
|  | Sig. (2-tailed) |  | .000 | .000 |
|  | N | 80 | 80 | 80 |
| LIL | Pearson Correlation | .821\*\* | 1 | .822\*\* |
|  | Sig. (2-tailed) | .000 |  | .000 |
|  | N  | 80 | 80 | 80 |
| EDT | Pearson Correlation | .822\*\* | .822\*\* | 1 |
|  | Sig. (2-tailed) | .000 | .000 |  |
|  | N  | 80 | 80 | 80 |

Source: Survey data, 2021

\*\*. Correlation is significant at the 0.01 level (2-tailed)

The Pearson Correlation result in Table 1 contains the degree of association between SDEV ,LIL and EDT. From the result, the Pearson correlation coefficient, r, value of 0.821 was positive and statistically significant at (p< 0.000) same as 0.822. This indicates that educational technology (EDT), lifelong learning (LIL) will result in sustainable development (SDEV) .

Thus, SDEV, LIL and EDT are correlated positively.

**Hypothesis 2**

**H0:** There is no relationship between the use of instructional media(INS), lifelong learning (LIL) and sustainable development (SDEV).

**HA:** There is a relationship between the use of instructional media(INS), lifelong learning (LIL) and sustainable development (SDEV).

**Table 2: Pearson Correlation Table showing the relationship between** **instructional media (INS), lifelong learning (LIL) and sustainable development (SDEV)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | SDEV | LIL | INS |
| SDEV | Pearson Correlation | 1 | .721\*\* | .722\*\* |
|  | Sig. (2-tailed) |  | .000 | .000 |
|  | N | 80 | 80 | 80 |
| LIL | Pearson Correlation | .721\*\* | 1 | .832\*\* |
|  | Sig. (2-tailed) | .000 |  | .000 |
|  | N  | 80 | 80 | 80 |
| INS | Pearson Correlation | .722\*\* | .832\*\* | 1 |
|  | Sig. (2-tailed) | .000 | .000 |  |
|  | N  | 80 | 80 | 80 |

Source: Survey data, 2021

\*\*. Correlation is significant at the 0.01 level (2-tailed)

The Pearson Correlation result in Table 2 contains the degree of association between SDEV ,LIL and INS. From the result, the Pearson correlation coefficient, r, value of 0.721 was positive and statistically significant at (p< 0.000) same as 0.722. This indicates that instructional media (INS), lifelong learning (LIL) will result in sustainable development (SDEV). Also the Pearson correlation coefficient, r, value of 0.832 was positive and statistically significant at (p< 0.000). This indicates that instructional media (INS) will result inlifelong learning (LIL)

Thus, SDEV, LIL and INS are correlated positively.

**CHAPTER FIVE**

**CONCLUSION AND RECOMMENDATION**

**5.1 CONCLUSION**

In this study, our focus was to carryout **a critical analysis on Educational Technology For Lifelong Learning And Sustainable Development.** The study specifically was aimed at discussed the concepts educational technology, lifelong learning and sustainable development in detail. The paper also described how instructional media and technologies can be employed to facilitate lifelong learning, and by implication, sustainable development. Some challenges facing the use of educational technology for lifelong learning and sustainable development have been pointed out. The paper concludes with recommendations such as: the fiscal provision for instructional facilities in educational institutions should be increased so that the technology needs of the institutions can be adequately met, and government should organize technology awareness seminars and workshops for educators on how to overcome techno-phobia. This study reviewed and anchored its framework on conversational theory.

The study adopted the survey research design and randomly enrolled participants in the study. A total of 80 responses were validated from the enrolled participants where all respondent are active staff in the Federal ministry of Education Abuja office.

From the result, the Pearson correlation coefficient, r, value of 0.821 was positive and statistically significant at (p< 0.000) same as 0.822. This indicates that educational technology (EDT), lifelong learning (LIL) will result in sustainable development (SDEV) . Thus, SDEV, LIL and EDT are correlated positively.

From the result, the Pearson correlation coefficient, r, value of 0.721 was positive and statistically significant at (p< 0.000) same as 0.722. This indicates that instructional media (INS), lifelong learning (LIL) will result in sustainable development (SDEV). Also the Pearson correlation coefficient, r, value of 0.822 was positive and statistically significant at (p< 0.000). This indicates that instructional media (INS) will result inlifelong learning (LIL)

Thus, SDEV, LIL and INS are correlated positively.

**5.2 RECOMMENDATION**

Based on the responses obtained, the researcher proffers the following recommendations:

1. The fiscal provision for instructional facilities in educational institutions should be increased so that the technology needs of the institutions can be adequately met, and
2. Government should organize technology awareness seminars and workshops for educators on how to overcome techno-phobia.
3. Improvement and provision of educational technologies around the country.

**References**

Adjei, P. and Dei, G. (2008) “Sankofa: In search of an Alternative development paradigm for

Africa”, in Abdi, A.A. and Richardson, G. (Eds.) Decolonising Democratic Education. Rotterdam: SENSE Publishers.

Alaboster, T. and Blair, D. (1996) “Greening the university”, in Huckle, J. and Sterling, S. (eds.),

Education for sustainability, London: Pegency Press.

Alam, K. R. (2004) “Operational definition of literacy for assessment purposes: Literacy to meet basic learning needs”, Adult Education and Development, Vol. 61, pp.41-50.

Belenger, P. (1994) “Lifelong learning: The dialectics of lifelong education”, International Review of Education, Vol.41, pp.353-381.

Blaschke, L.M. (2012) Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning. International Review of Research in Open and Distance Learning, 13 (1), 56-71. Retrieved from: http://www.irrodl.org/index.php/irrodl/article/view/1076/2113 (10/06/2016).

Bosco, J. (2007) Lifelong learning: What? Why? How?. Michigan: Western Michigan University. Chambers, R. (2003) Whose reality counts?: Putting the first last. London: ITDG Publishers.

Chambers, R. and Conway, G.A. (1991) Sustainable rural livelihoods: Practical concepts of the 21st century. IDS Discussion paper 296.

Collins, M. (1998) lifelong education as emancipatory pedagogy, In Scott, S. Spencer. B. & Thomas. A. (eds.) learning for life: Canadian reading in adult education, pp. 107-113 (Toronto, Thompson Educational Publishing).

Commission of the European communities (2000) A memorandum on Lifelong Learning.

Brussels: Commission Staff Working Paper.

Corkill, H. (2008) “learning for work and working to learn: Challenges within a changing UK higher education system”, US-China Education Review, Vol. 5 No.1, pp.1-80.

Cropley, A.J. (1989) “Lifelong education: Research strategies”, in Titmus, C. (ed.) Lifelong education for adults. Oxford: Pergamon Press.

DVV (2007) “Lifelong Learning- Need and funding”, Adult Education and Development, Vol.68, pp.105-142.

Emery, F. (1974) Educational paradigms. Unpublished paper.

Gravells, A. and Simpson, S. (2009) Equality and diversity in the lifelong learning sector. London: SAGE Publication Ltd.

Hase, S. and Kenyon, C. (2000). From andragogy to heutagogy. In UltiBase Articles. Retrieved from http://ultibase.rmit.edu.au/articles/dec00/base2.htm (23/07/2016).

Hase, S. and Kenyon, C. (2001) From Andragogy to Heutagogy. Retrieved from: http://www.psy.gla.ac.uk/-steve/pr/Heutagogy.html (23/08/2016).

Hase, S. and Kenyon, C. (2007). Heutagogy: A child of complexity theory. Complicity: An International Journal of Complexity and Education, 4 (1), pp.111-119.

Illeris, K. (2006) “What is special about adult learning”, in Sutherland, P. and Growther, J. (eds.), Lifelong learning. London: Routledge.

Inoue, Y. (2007) Online education for lifelong learning. Hershey: Information Science Publishing.

Kuit, J.A. and Fell, A. (2010) Web 2.0 to pedagogy 2.0: A social-constructivist approach to learning enhanced by technology. In critical design and effective tools for e-learning in higher education: theory into practice. New York: IGI Global.

Lengrand, P. (1970) An introduction to lifelong education. Geneva: UNESCO.

Livingstone, D.W. (1999) “Lifelong learning and underemployment in the knowledge society: A North American perspective”, Comparative Education, Vol. 35, No.2, special number (21), pp.163-186.

Michalakelli, J. and Rhodes, V. (2000) Adult education and lifelong learning. Hellenic Communication Service. http://www.Helleniccomserve.com Retrieved (2/04/2014).

Nayar, K. R. (1994) “Politics of ‘Sustainable development’, Economic and Political Weekly, Vol. 29, No.22, pp.1327-1329.

Preece, J. (2009) Lifelong learning and Development. London: Continuum International Publishing Group.

Preston, R. (1999) “Critical approaches to lifelong learning”, International Review of Education, Vol. 45, (5-6), pp.561-574.

Rao, P.K. (2000) Sustainable Development: Economics and Policy. Oxford: Blackwell Publishers Inc.

Redclift, M. (1991) Sustainable development: Exploring the contradictions. New York: Routledge.

Rifkin, J. (2000) “The new capitalism is about turning culture into commerce”, International Herald Tribune, January, 27, p.8.

Sterling, S. (1996) “Education in change”, in Huckle, J. and Sterling, S. (eds.) Education for sustainability. London: Earthscan Publications.

Sterling, S. (2001) sustainable education: Revisioning learning and change. Bristol: Green Books Ltd.

Steward, H and Kenyon, C. (2000) From andragogy to heutagogy. Lismore: Southern Cross University.

Stott, C. and Lillis, F. (2008) “The right to make wrong choices- liberty, ;earning and credit systems in the twenty-first century”, in Flint, C. and Hughs, C. (Eds.) Not just the economy: The public value of adult learning. Leicester: NIACE Publishers.

Sussmuth, R. (2004) “Lifelong learning, adult education, employability”, Adult Education and Development, Vol.61, pp.165-180.

Thomas, J. (2004) “Using an educational productivity model to construct process models for mathematics achievement and attitudes among ethnic minorities”, In Paik, S. J. (ed.) Advancing educational productivity. Greenwich: IAP Information Age Publishing.

Tickell, C. (1996) “Sustainable Development: Definitions and Values”, Brown Journal of World Affairs, Vol. 3, No.2, pp.299-304.

Tight, M. (1998) “Lifelong learning: opportunity or compulsion?, British Journal of Education Studies, Vol.46, No.3, pp.251-263.

Torres, R. M. (2003) “Lifelong learning: A new momentum and a new opportunity for Adult Basic Learning and Education (ABLE) in the South”, Adult Education and Development (60), Bonn: Institute for International Cooperation of the German Adult education Association (IIZ/DVV).

UNCED (1992) Agenda 21, London: Regency Press.

UNESCO (2010) “Harnessing the power and potential of Adult learning and education for a viable future”, CONFITEA VI (follow-up; Comments and plans), Vol.75, pp.9-24.

Varavarn, K. K. (2010) “Towards Lifelong Learning”, Adult Education and Development, Vol.75, pp.25-40.

Venkatesh, M. Small, R.V. and Marsden, J. (2003) Learning-in-community: Reflections and Practice. London: Kluwer Academic Publishers.

Walters, S. (1999) “New challenges and opportunities for lifelong learning in South Africa”, Comparative Education, Vol. 35, No.2, Special number (21): Lifelong Learning and the education of mature Adults, pp.217-224.

Watson, D. and Taylor, R. (1998) Lifelong learning and the University: A post clearing agenda.

Bristol: Falmer Press.

**QUESTIONNAIRE**

**PLEASE TICK [√] YOUR MOST PREFERRED CHOICE AND AVOID TICKING TWICE ON A QUESTION**

**SECTION A**

**PERSONAL INFORMATION**

**Gender**

Male [ ] Female [ ]

**Age**

18-25 [ ]

20-30 [ ]

31-40 [ ]

41 and above [ ]

**Educational level**

WAEC [ ]

BSC/HND [ ]

MSC/PGDE [ ]

PHD [ ]

Others……………………………………………….. (please indicate)

**Marital Status**

Single [ ]

Married [ ]

Separated [ ]

Widowed [ ]

**Duration of Service**

0-2 years [ ]

2-5 years [ ]

1. and above [ ]

**Section B**

Do you know about educational technologies ?.

1. Yes [ ]
2. No [ ]
3. Not sure [ ]

Do know about instructional media ?.

1. Yes [ ]
2. No [ ]
3. Not sure [ ]

Does instructional media help to improve longlife learning ?.

1. Yes [ ]
2. No [ ]
3. Not sure [ ]

Does longlife learning lead to sustainable development ?.

1. Yes [ ]
2. No [ ]
3. Not sure [ ]

How can longlife leaning be improved ?.

….……………………………..

….…………………………………

….…………………………….